

AMENDMENT TO THE CLAIMS

1. (Currently Amended) An isolated nucleic acid molecule comprising a nucleotide sequence that is at least 85% identical to the nucleotide sequence set forth in SEQ ID NO:5, wherein the nucleic acid molecule encodes a MMP-25 polypeptide that exhibits catalytic activity that is the same as that of a wild-type MMP-25 polypeptide comprising the amino acid sequence set forth in SEQ ID NO:6.

2. (Cancelled)

3. (Previously Amended) A method of identifying a nucleic acid molecule encoding all or a part of a MMP-25 polypeptide, comprising:

(1) hybridizing a nucleic acid molecule sample to an oligonucleotide encoding a peptide that consists of an amino acid sequence selected from the group consisting of amino acids at positions 1-61 of SEQ ID NO:6, amino acids at positions 98-111 of SEQ ID NO:6, and amino acids at positions 161-170 of SEQ ID NO:6; and

(2) identifying a sequence in said nucleic acid sample that hybridizes to the oligonucleotide under high stringency conditions.

4. (Original) The method of claim 3, wherein the step of identifying includes performing a polymerase chain reaction to amplify said hybridizing sequence.

5. (Currently Amended) An expression vector comprising a nucleic acid molecule according to any one of claims 1 and 25-29 operably linked to an expression control sequence.

6. (Previously Amended): The vector of claim 5, wherein said vector is selected from the group consisting of a plasmid vector, a phage vector, a herpes simplex viral vector, an adenoviral vector, an adenovirus-associated viral vector, and a retroviral vector.

7. (Original) A host cell transformed or transfected with an expression vector according to claim 5.

Claims 8-24 (Cancelled)

25. (Currently Amended) An isolated nucleic acid molecule consisting of the nucleotide sequence as set forth in SEQ ID NO:1, or the complementary sequence thereof.

26. (Currently Amended) An isolated nucleic acid molecule comprising the nucleotide sequence as set forth in SEQ ID NO:3, or the complementary sequence thereof.

27. (Currently Amended) An isolated nucleic acid molecule comprising the nucleotide sequence as set forth in SEQ ID NO:5, or the complementary sequence thereof.

28. (Previously Presented) An isolated nucleic acid molecule that encodes a polypeptide comprising an amino acid sequence set forth in SEQ ID NO:4.

29. (Previously Presented) An isolated nucleic acid molecule that encodes a polypeptide comprising an amino acid sequence set forth in SEQ ID NO:6.

Claims 30-31 (Cancelled)